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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,024	09/24/2003	Russell L. Simpson	CE11695JME	4530

7590 07/06/2004
Larry G. Brown
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EXAMINER

PATEL, TULSIDAS C

ART UNIT PAPER NUMBER

2839

DATE MAILED: 07/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,024

Applicant(s)

SIMPSON ET AL.

Examiner

T. C. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

General Status

1. This is a First Action on the Merits. Claims 1-22 are pending in the case.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, it is not clear what is meant by “a predetermined direction” and also, how the “said first surface forces at least a portion of said pin.” The first surface has no capacity to generate any force. Claim 18 has also similar recitation.

The independent claims 1 and 18, fails to recite critical elements of the invention, i.e. they fail to recite the elements necessary to establish “whereby contaminants are ... predetermined direction.”

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 1-3, 6-8, 10, 11 and 18-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Bishop (US 5,540,599).

For claims 1 and 18, Bishop, in figures 1-9, discloses a connector 40 comprising at least one tunnel 52 having a first portion and a second portion, at least one pin 50 wherein at least a portion of the pin is positioned in the tunnel, the first portion of the tunnel has an inner surface which forces the pin in a direction, as the connector engages a corresponding connector 12, whereby the contaminants removed from the pin or the corresponding connector. For claims 2 and 19, the angle is zero, for claims 3 and 20, mating of connector 40 and 12, causes movement of pin surface 56 along surface 32 of contact 24 of corresponding connector 12, which causes wiping action, whereby the contaminants are removed.

For claims 6-8, the tunnel 52 has upper and lower surfaces, both act with the surfaces of the contact. For claim 10, a plurality of tunnels is disclosed in figure 8 and tip of contact extends beyond front surface of the tunnels. For claim 11, the connector 40 is an accessory connector (column 1, lines 5-10, and lines 62-66; column 2, lines 30-35).

6. Claims 1-3, 6-8, 10, 11 and 18-20 are rejected under 35 U.S.C. § 102(b) as being anticipated by Neidch (US 6,315,576).

For claims 1 and 18, Neidch, in figures 1-12, discloses a connector 10 comprising at least one tunnel 26 having a first portion and a second portion, at least one pin 14, 64 wherein at least a portion of the pin is positioned in the tunnel, the first portion of the tunnel has an inner surface which forces the pin in a direction, as the connector engages a corresponding connector 98, 100, whereby the contaminants removed from the pin or the corresponding connector (column 8, lines 65-67). For claims 2 and 19, the predetermined angle is zero, for

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claims 3 and 20, mating of connector 10 and 98, 100, causes movement of pin surface 38 along surface of contact 102, 104 of corresponding connector 98, 100, which causes wiping action, whereby the contaminants are removed.

For claims 6-8, the tunnel 29, 79 has upper and lower surfaces (two side surfaces, see figures 1 and 15, both act with the surfaces of the contact. For claim 10, a plurality of tunnels is disclosed in figure 1, and tip of contact extends beyond front surface of the tunnels. For claim 11, the connector 10 is an accessory connector.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 4, 5, 9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop (US 5,540,599) in view of Curtis et al. (US 5,158,468).

For claims 4 and 12, as discussed above, Bishop substantially satisfies the limitation of claim 4. Bishop also disclose spring section, an elongated portion and retaining means 62, 64, however, Bishop does not pin includes a fork. Curtis et al. discloses a contact terminal with retaining area having a fork. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a fork section the contact terminal of Bishop, as taught by Curtis et al. so that the contact can be retained in the contact cavity. For claim 5, the elongated portion and the axis of the contact cavity run along the same direction.

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For claim 9, a portion closed to the surface 68 is taken as first portion and cavity portion is taken as second portion.

For claims 12 and 13, the contact includes an elongated portion, a spring portion attached to the elongated portion and a fork portion (part of element 66) attached to the spring portion. For claim 14, the interaction of angled surface 32 and tip 56 of contact terminal of Bishop makes the contact to rotate by a small degree as the contact moves along the surface 32.

9. Claims 4, 5, 9, 12-17, 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neidch (US 6,315,576) in view of Curtis et al. (US 5,158,468).

For claims 4 and 12, as discussed above, Neidch substantially satisfies the limitation of claim 4. Neidch also disclose spring section, an elongated portion and retaining means (figure 5), however, Neidch does not pin includes a fork. Curtis et al. discloses a contact terminal with retaining area having a fork. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a fork section the contact terminal of Neidch, as taught by Curtis et al. so that the contact can be retained in the contact cavity. For claim 5, the elongated portion and the axis of the contact cavity run along the same direction. For claim 9, a portion closed to the surface is taken as first portion and cavity portion is taken as second portion.

For claims 12 and 13, the contact includes an elongated portion (top), a spring portion 44 attached to the elongated portion and a fork portion (middle retaining part) attached to the spring portion. For claim 14, the interaction of surface of contact 102 and contact top of Neidch makes the contact to rotate by a small degree as the contact moves along the surface of

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contact 102. For claims 15, 16, 21 and 22, the cavity surfaces are curved, see figure 1 of Neidch, cavity divided along the center of contact, left taken as one surface, and right taken as second surface, both having curved surfaces.

10. The prior art made of record and not relied upon is considered pertinent to applicant's invention. Tate et al. (US 6,241,537), Canova et al. (US 6,283,777), Marren et al. (US 5,716,230), Kato et al. (US 5,584,713), Cruise et al. (US 5,259,769) all discloses wiping contacts.

Applicant also should consider these references in response to this office action. Should issue arise concerning the rejection presented above, these references may be relied upon in a subsequent action to support the lack of novelty or obviousness of claimed subject matter to one of ordinary skill in the art.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. C. Patel whose telephone number is (571) 272-2098. The examiner can normally be reached on 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on (571) 271-2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



T. C. Patel
Primary Examiner
Art Unit 2839

Tcp
June 24, 2004